
RM1024-JLG 24V-1000 Watt Heavy Duty Weatherproof Inverter/Charger Installation Instructions

RM1024-JLG

975-0211-01-01
Revision A

Important Safety Instructions



WARNING

This document contains important safety instructions as prescribed by safety standards for inverter/chargers. Read and keep these Important Safety Instructions for future reference.

General Precautions

1. Before using the RM1024-JLG, read all of this document and any cautionary markings on the inverter/charger and the batteries.
2. Use the grounded AC cord supplied when connecting to AC input power (qualified external AC). Do not remove or attempt to defeat the ground connection to the qualified external AC source in any way. If an extension cord is necessary, ensure that it is a minimum 12 AWG and not more than 12 feet long.
3. If possible, plug the RM1024-JLG into an AC source outlet that is protected by a Ground Fault Circuit Interrupting (GFCI) device, either a breaker or outlet.
4. Do not operate the RM1024-JLG if it has received a sharp blow, been dropped, or otherwise damaged. If the unit is damaged, return it to Xantrex.
5. Do not dismantle the RM1024-JLG; it contains no user-serviceable parts. Attempting to service the unit yourself could cause electrical shock or fire. Internal capacitors remain charged after all power is disconnected.
6. To reduce the risk of electrical shock, use the toggle switch to turn the RM1024-JLG to Standby, then disconnect both qualified external AC and battery power from the unit before working on any circuits connected to it. Turning the toggle switch to Standby alone will not reduce this risk.

Precautions When Working With Batteries

1. Follow all instructions published by the battery manufacturer and the manufacturer of the equipment in which the battery is installed.
2. Make sure the area around the battery is well ventilated.
3. Never smoke or allow a spark or flame near the battery.
4. Use caution to reduce the risk of dropping a metal tool on the battery. It could spark or short circuit the battery or other electrical parts and cause an explosion.
5. Remove metal items like rings, bracelets, and watches when working with lead-acid batteries. These batteries produce a short-circuit current high enough to weld a ring, other metal jewelry or tools, thus causing severe burns.
6. If you need to remove a battery, always remove the negative terminal from the battery first. Make sure all accessories are off so you don't cause an arc.

GFCI Requirements

Compliance with UL standards requires that Xantrex test and recommend specific GFCIs for use on the output of the RM1024-JLG.



WARNING: Shock hazard

Not all makes and models of Ground Fault Circuit Interrupters (GFCIs) work properly with all inverter/chargers. Use only GFCIs that are listed as usable for your model of inverter/charger in the Xantrex Application Note, *Using GFCI Receptacles on Xantrex Inverters and Inverter/Chargers* (part number 976-0100-01-01), available at www.xantrex.com or by contacting Xantrex Customer Service.

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Related Information

For related material on this product and illustrations, see the *RM1024-JLG 24V-1000 Watt Heavy Duty Weather Proof Inverter/Charger Owner's Guide*.

Materials Required

To mount and connect the RM1024-JLG, you need the following tools:

- screw driver (Philips head #2)
- screw driver (Flat head #2)
- wrench for 3/8" nut

You need the following materials:

- 4 screws of M8 × 1.25" (30 mm), Philips head
- AC input and output cables and connectors are per specification (539-2049-01-01)
- DC cables (min #4 AWG, no longer than 6 feet each)
- Remote cable and connector as per specification (539-2049-01-01)

Location

Install the RM1024-JLG in a location that meets the following requirements:

Condition	Description
Clean	The RM1024-JLG should not be exposed to metal filings or any other form of conductive contamination.
Cool	The ambient air temperature should be between 32 °F–122 °F (0 °C–50 °C) for best performance.
Ventilated	Allow for as much clearance as possible, at least 3 in. (76 mm) of clearance on all sides of the RM1024-JLG for air flow.

Wiring Requirements



WARNING

Wire and fuse sizes are dictated by electrical standards. Different standards apply in different countries and different types of installations. It is the responsibility of the installer to ensure that the installation complies with all local applicable standards, considering the environmental conditions and the application. Xantrex recommends a 125 amp DC fuse and disconnect or a DC breaker to be installed within 1 foot of the battery terminal.



CAUTION

Ensure that both wires and fuses are correctly sized. Maximum continuous current available from the unit may be an additional 6–10% above the current rating of the unit. Output current may also vary depending on ambient temperature conditions.

Installation Steps and Sequence

To make installation of the RM1024-JLG quick and easy:

1. Select mounting position, and plan AC and DC cable routing.
2. Install AC and DC cable runs and the AC and DC fuses or breakers.
3. Mount the unit in position.
4. Make the final DC and then AC cable connections.

Installing DC Cables

Use the recommended DC cable and terminals. The cable should be a #4 AWG or larger and each cable should not be longer than 6 feet.



WARNING: Shock hazard

Make sure that the DC fuse or circuit breaker is still open.

To remove and replace the terminal cap:

1. See diagram on the fuse cover label to remove the DC terminal and fuse caps.
2. Using a flathead screwdriver, place the blade in the lip of the cap.
3. Push the screwdriver gently against the cap until it lifts off.
4. To replace the cap, place it over the terminal and push down until it snaps into place.

To connect to the batteries:

- u Ensure that the AC connections are disconnected and the toggle switch is turned to Standby.
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CAUTION: Reverse polarity

If the cables are connected in reverse polarity, the external DC fuse on the unit will blow and the unit could be damaged. Be sure the polarity is correct: negative to negative, and positive to positive.

5. Connect the battery cable to the RM1024-JLG positive terminal, and tighten to a torque of 14.5 ft-lb maximum. Excessive tightening will shear off the stud.
6. Connect the battery cable to the positive terminal on the battery.
7. Connect the battery cable to the battery negative terminal, and then make the last connection to the RM1024-JLG negative terminal. Tighten to a torque of 14.5 ft-lb maximum. Excessive tightening will shear off the stud.

AC Connectors and Inverter/Charger Cable



WARNING: Shock and energy hazards

Be sure to read the safety guidelines and pay attention to all cautions and warnings throughout the installation procedure. Disconnect all sources of AC (breakers) and DC power (fuse or disconnect) before proceeding.

To connect the AC input, AC output, and control connectors:

1. Insert the connector halves firmly to each other.
2. Turn the connector housing clockwise 1/2 turn until there is resistance.
3. Turn another 1/8 turn until you feel it lock into place with a final click.

Quick Check on Powering Up

Make one last check that all connections and connectors are secure.

To power up the RM1024-JLG:

1. Connect DC power by closing the disconnect or DC breaker.
2. Turn the toggle switch to On. It is normal to see a 10 to 15 second delay while the unit powers up.
3. Plug in any appliance and ensure the load operates.
4. Connect qualified external AC and ensure that the yellow indicator light on the inverter/charger control box is illuminated (indicating that qualified external AC is present).
5. Turn the toggle switch to Standby and disconnect external AC.

Congratulations! You have successfully installed the RM1024-JLG inverter/charger.

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